

Date: Wednesday, 02/04/2008 3:39:27 PM
 User: Julie Lecocq

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	CROSSTUBE EXTRUSION (206L)
Job Number :	38336		
Estimate Number :	10027		
P.O. Number :		Part Number :	D6004115
This Issue :	02/04/2008	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D6004 REV A
First Issue :	11	Project Number :	N/A
Previous Run :	34774	Drawing Revision :	A
		Material :	
Written By :		Due Date :	20/11/2008
Checked & Approved By :	JD 08.4.03		
Comment :	Est Rev:B 00.12.15 Added: Issue P/O EC		

Qty: 37 Um: Each

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O 6064

C208/04/04

(37)

a) Extrude as per Dwg D6004

b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strength = 66 ksi

e) Material certification required

2.0

D6004115P

Crosstube material



Comment: Qty.: 1.0000 Each(s)/Unit Total: 37.0000 Each(s)

Crosstube material

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

Pc 8/14/17

38

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6004

S 08/10/23

L. O. Santos

(736)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CROSSTUBE EXTRUSION (206L)

Job Number: 38336

Part Number: D6004115

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

MA 08/10/23

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *HALL 7*

D 08/10/23 HWM/MP 38

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/10/24

Job Completion



MF 08-10-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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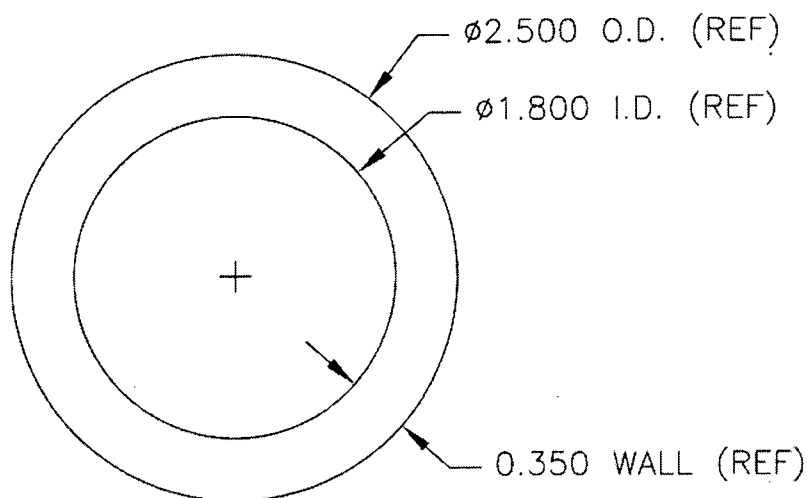
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>	APPROVED <i>A</i>	DRAWING NO. D6004	REV. A SHEET 1 OF 1
DATE 00.11.22		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.22	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24



NOTES

- 1) D6004-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6004-115

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38334

- 2) MATERIAL: 2.500 OD x 0.350 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.035 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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Customer PO	PO. 0006064
ALUnna ref. no.	29105/2
Date:	09.25.08

Dart Aerospace PO. 00006064
D 6004-115 Made in Germany
Dest. Hawkesbury Ont. Canada

free from live plant pests

[illegible]

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde: Dart Aerospace Ltd.
 Client: 1270 Aberdeen Street
 K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1447/08
 Cert No.: / No. du certificat:

Bestellnummer: PO00006064
 Order No. / No. de commande

Auftrag: 29105/2
 Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst
 Product / Produit: Tubes seamless extruded
Spezifikation: AMS - QQ - A - 200/11; Spezifikation Dart Aerospace D6004
 Specification:

Werkstoff: 7075
 Alloy/Alliage:

Zustand: T 6511
 Temper/État

Abmessung: 2,500 INCH x 1,800 INCH x 0,350 INCH x 115,000 INCH
 Size / Dimension D6004-115 2.500 X 0.350 X 115

Kennzeichnung: ALUnna - Cert No. 1447/08 - 7075 - T 6511 - Cast No. 81742 - AMS - QQA 200/11 - 2.500" OD X 0.350" Wall - Heat
 Marking/Marquage: Lot No. 1859 - ALUnna Order Conf. No. 29105/2-1 PO. 00006064

Lieferung: pcs. lbs
 Delivered Material / Matériel délivre: 38 1049
 Country of Manufacture: Germany

1. Chemische Analyse Chemical Analysis / analyse chimique

Charge/	min.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Cast No.	max.	0,40	0,50	1,2	0,30	2,1	0,18	5,1	0,20					
81742		0,07	0,13	1,38	0,04	2,45	0,19	5,73	0,04	0,01	0,03	0,01	0,01	0,0001

Hydrogen content: <0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften Mechanical Properties / Valeurs Mécaniques

Anforderungen	tensile	yield	elongation	elongation	Hardness	Heat Lot No.
Requirements	(Rm) ksi	(Rp0,2) ksi	2" %	A %	HB	
min.	77,0	66,0				
max.						
1	86,710	79,895	9,0			1859 - 38 pcs.

RMS: outside 25 - max. 14,5 µ"

Ergebnis der Prüfungen: Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order
Resultats: Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

Kramper

26.09.2008



Certified acc. DIN EN ISO 9001:2000 and DIN EN 9100:2003
 valid until 2010-11-11
 Cert.- Reg. No.: 001959 QM; 001959 ASH

 ALUnna